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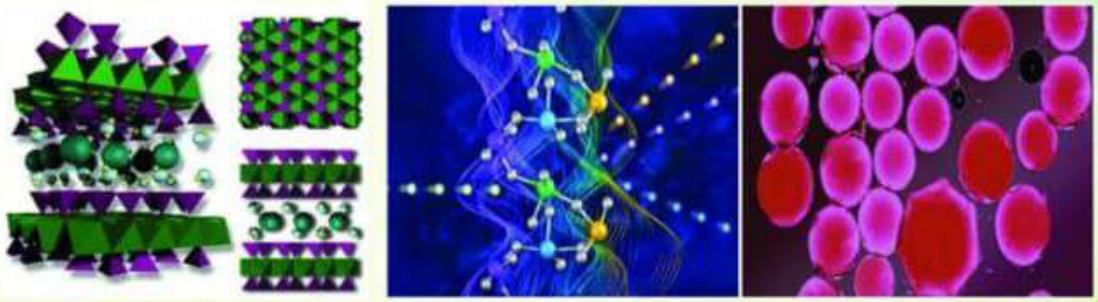

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A Review on Bio-energy production by Emerging Technologies

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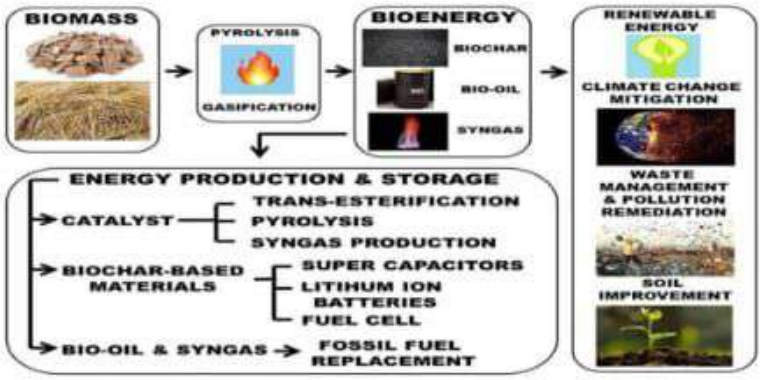
Abstract

With a drastic increase in population growth, energy consumption has increased unprecedentedly. The exploitation of fossil fuels, for energy supply, has led to its uncontrolled depletion. The dramatic increase in the atmospheric carbon dioxide levels and the apprehensive situation of energy supply are leading to the importance of renewable energy technology studies. The abundance of biomass and its immense potential as a renewable source of energy makes it a suitable alternative to be used for energy production, conversion, and storage. Bio-energy is normally produced from biological processes (fermentation or anaerobic digestion) via utilization of effective and suitable microbial system and sustainable raw substrates (agricultural crops biomass residue or biological wastes). The thermal treatment of biomass, via methods such as gasification and pyrolysis, yields biochar, bio-oil, and syngas. These are excellent sources of clean energy.



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